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Medical Research Council
War Memorandum No. 3

ECONOMY IN THE USE OF DRUGS IN WAR-TIME

Revised Second Edition

With an Appendix on Economy in
the Use of Bactericides

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LONDON

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ECONOMY IN THE USE OF DRUGS IN WAR-TIME

SECOND EDITION

The first edition of this Memorandum was issued in March 1941. The Memorandum expressed the considered opinions of the Therapeutic Requirements Committee, which was appointed in September 1939 by the Medical Research Council in consultation with the Ministry of Health. The object of the publication was to give to those concerned with the supply of drugs an indication of the relative therapeutic importance of the drugs in ordinary use, and to members of the medical profession some information regarding the availability in war-time of the materials which they were accustomed to prescribe.

In preparing the first edition, the scope was extended, after consultation with the Ministry of Agriculture and Fisheries, to include veterinary applications of drugs.

In November, 1941, the First Supplement to this Memorandum was issued, in order to bring the recommendations up to date. In April, 1942 a Memorandum on Economy in the Use of Bactericides, prepared by the Therapeutic Requirements Committee, was issued by the Medical Research Council to the medical and pharmaceutical press.

Since the publication of the first edition of the present Memorandum, effect has been given to its recommendations, by means of Addenda to the British Pharmacopoeia 1932, Supplements to the British Pharmaceutical Codex, and the National War Formulary. A new edition is now considered advisable, in consequence of changes in the supply position of many drugs, the introduction of new remedies, and increased knowledge of drugs as the result of war-time experience.

In the first edition, an Appendix on the Production of Drugs within the British Empire was included. The activities arising in this connection have since been assumed by the Vegetable Drugs Committee, set up by the Minister of Health, and now working within the organization of the Ministry of Supply.



This Committee serves as a clearing house of information concerning the collection and production of vegetable drugs at home and abroad, and operates its own information service. It has not been considered necessary to reprint this Appendix in the present edition.

The body of the Memorandum takes the form of a list of drugs classified according to their therapeutic value and their availability in war-time, the main lines of the original list being followed. Revisions and extensions have been made as the result of the information and suggestions which have come to the notice of the Committee, following on the publication of the first edition. It is recognised that the list should cover, as far as possible, the drugs in general use, and should not attempt a drastic restriction to those essential for the saving of life; and it has never been the view of the Committee that any necessity existed for so drastic a restriction.

Some change in the method of classifying the drugs in the list has been made in this edition. The classification adopted in the first edition has been criticised on the ground that it brought together, in class "A," drugs which were regarded as essential and those which were readily available, without indicating in particular instances which of these reasons had determined the inclusion of the drugs in that group. At the time of publication of the Memorandum, however, it seemed undesirable to make freely available for publication the information about the state of supplies of essential drugs in this country, which was at the disposal of the Committee. As the war has proceeded, it has become increasingly difficult to keep separate the ideas that a drug, on the one hand, may be readily available, and, on the other hand, may be essential to the practice of medicine. The shortage of one drug may lead to an unusually extensive demand for another, which in consequence becomes in short supply. Owing to the fact that stocks of drugs of all kinds tend to be smaller in time of war than in peace, there may be an insufficient margin to meet such increased requirements, and changes in the supply position of drugs may occur quickly. Too rigid a classification may thus defeat its own object unless a complete scheme of rationing is introduced, and this has fortunately not proved necessary. In any event, no drug can be regarded as freely available to-day, even though it comes from a local source, for transport, labour, packing, bottles, corks, labels and so on, are all in short supply. Economy is therefore necessary in the use of all drugs.

The classification adopted in this edition is accordingly as follows:

- A. Drugs which are important therapeutic agents, and which should be made available so far as practicable.
- B. Drugs which are needed for certain purposes, but of which supplies are limited.
- C. Drugs which are not essential and do not justify importation or manufacture for home use in war time.

In this new classification, the group "A" now aims at indicating simply those drugs which are eminently of value as therapeutic agents. The classification "B" indicates that there are special difficulties of supply which make economy imperative, and it is left to the good sense of the prescriber to use them only for the purposes for which they are known to be of substantial value. Although alternatives to "B" drugs are usually indicated, it is not always possible to do this. The prescriber should use his discretion in the exhibition of alternatives and should not prescribe a "B" drug as a placebo.

The new list covers the drugs included in the war-time Addenda to the British Pharmacopoeia 1932, in the Supplements to the British Pharmaceutical Codex and in the National War Formulary. The classification of some items in the original list has been changed, many new items have been added, and the First Supplement, published in 1941, has been incorporated.

The Memorandum on Economy in the Use of Bactericides, referred to on p. 2 above, has been revised and is included as an Appendix.

The Committee wishes to make it clear that the list is primarily intended to

secure the wisest economy in the use of drugs for consumption in this country, and that other considerations may affect the importation or manufacture of drugs for the export trade. Responsibility for the provision of drugs and therapeutic substances is now vested in the Ministry of Supply, which acts in consultation with the Ministry of Health. Both Ministries are represented on the Therapeutic Requirements Committee. Certain substances used as drugs come under the control of other bodies, such as the Ministry of Food and the Petroleum Board, but close contact is maintained with them by the Ministry of Supply. Difficulties in obtaining supplies of important drugs should be referred to the Directorate of Medical Supplies, Ministry of Supply, Portland House, Tothill Street, S.W.1.

Acacia	A	Acidum Glycerophosphoricum and its salts	C
Acaprin —Pirevan and Piroparv are identical	—	No substitute necessary.	
Acetanilidum	C	Acidum Hydrobromicum	C
Substitutes:—Acetylsalicylic acid, phenacetin.		Acidum Hydrochloricum	A
Acetarsol	A	Acidum Hydrocyanicum	A
† Acetomenaphthonom	A	† Acidum Hypophosphorosum and its salts	C
Acetonom	B	Acidum Lacticum	B
Under Government control.		Acidum Mandelicum	A
Acetylcholine	C	Acidum Nicotinicum	A
Acidum Aceticum	B	Acidum Nitricum	B
† Acidum Acetylsalicylicum	B	Acidum Oleicum	B
Strict economy is essential—raw materials are in short supply.		† Acidum Phosphoricum	B
Acidum Ascorbicum	B	† Acidum Ricinoleicum	B
Ascorbic acid should be prescribed only in the presence of medical indications for its use. It should not be used as a supplement to normal diet.		Acidum Salicylicum	A
Acidum Benzoicum	B	Acidum Sulphuricum	A
Acidum Boricum	B	Acidum Tannicum	A
Boric acid in Boric Lint is wasted. Reserve for Cataplasma Kaolini and eye lotions. In dermatological practice, saline compresses may be used instead of boric fomentations, and for dusting powders boric acid may be replaced by zinc oxide, magnesium trisilicate or kaolin.		Acidum Tartaricum and its salts	B
† Acidum Cacodylicum and its Salts	C	Raw material is imported. Production within the Empire should be encouraged.	
Acidum Citricum	B	Aconitum	C
Manufacture under Government control.		Countries of origin:—Germany, Switzerland, France. Importation unnecessary. Substitute:—Benzocaine for local application.	
Acidum Chromicum (Chromii Trioxidum)	A	Acriflavina	A
		Adeps Benzoinatus	B
		Under Government control.	
		Adeps Lanæ	A
		Under Government control.	
		Adrenalina, its salts and esters.	A
		Æther	A
		Æthylum	C
		Æthylis Chloridum	A
		Æthylmorphinæ Hydrochloridum	A

† Indicates an addition to the First Edition.

‡ Indicates a change from the First Edition.

† Biliselectan	—	* Calx Chlorinata	A
Pheniodol is identical		Camphora	A
Bismuthum Præcipitatum	A	Production within the Empire should be encouraged.	
Bismuth salts	B	Cannabis Indica	C
Reserve for the treatment of syphilis and tropical diseases. Substitutes (for gastro-intestinal conditions): — Aluminium hydr-oxide, chalk, kaolin, magne-sium trisilicate.		Countries of origin:—India, S. Africa, Zanzibar.	
Bismuthi Salicylas	B	Cantharis	C
Reserve for the treatment of syphilis and tropical diseases. Substitutes (for gastro-intestinal conditions):—Activated charcoal, kaolin.		Cantharidinum }	
† Bismuthi Subgallas	B	Countries of origin:—U.S.S.R., Spain, Hungary, China. Importa-tion unnecessary in war-time. Production within the Empire should be encouraged. Substitute: —Sinapis.	
Reserve for local application.		Capsicum	B
† Borax	B	Countries of origin: — Nigeria, Sierra Leone, E. India. Restrict use of capsicum to manufacture of capsicum wool. Substitute:— Sinapis. Colonial varieties of cap-sicum may be obtainable.	
Glycerin of borax and honey of borax may be replaced by aqueous solutions of aniline dyes in the treatment of thrush.		Carbacholum	A
† Brilliant Green	A	Carbamide (Urea)	A
Bromethol	A	Carbo	A
† Bromoisovalerianylurea	C	Carbo Activatus	A
Bromides	B	Carbonei Dioxidum	A
Strict economy is necessary.		Carbonei Tetrachloridum	A
Bromoformum	C	Carbromalum	B
† Buchu	C	Cardamomum	A
Country of origin:—S. Africa. Sub-stitutes:—Hexamine, mandelic acid, scoparium, sulphanilamide.		Cardiazol	—
Caffeina	B	Leptazolum of home manufacture is identical.	
Omit from compound tablets such as compound aspirin tablets.		† Carotene	A
Caffeina et Sodii Benzoas	B	Carum	C
Amphetamine (benzedrine), lep-tazol (cardiazol) and niketha-mide (coramine) are partial sub-stitutes.		Countries of origin:—Holland, Germany. Some English caraway is available and its production should be encouraged. Substitute: —Anethum (dill).	
Calamina	A	Caryophyllum	B
Calciferol	A	Countries of origin:—E. India, Zanzibar, Pemba, Madagascar. Reserve for distillation of the oil.	
Calcii Carbonas	A	Cascara Sagrada	B
Calcii Chloridum	A	Countries of origin: — Canada, U.S.A. Production within the Empire should be encouraged.	
† Calcii et Sodii Lactas	A	Cassia	C
Calcii Gluconas	B	Country of origin:—India. Im-portation unnecessary.	
Calcii Hydroxidum	A	Catechu	B
Calcii Lactas	A	Krameria may be substituted in veterinary practice.	
† Calcii Phosphas	A	† Celery Seed	C
Calcii Sulphas Exsiccatus	A		
† Calumba	C		
Country of origin:—E. Africa (Mozambique). Substitute:— Quassia.			

* Indicates that the drug is specially called for under Acts and Orders of the Ministry of Agriculture.

† Indicates an addition to the First Edition.

‡ Indicates a change from the First Edition.

Cera	A	Importation unnecessary. Substitute:—Cardamomum.	
Chiniofonum	A		
Chloralis Hydras	A	Corpus Luteum and its preparations	B
Chloramina	A	Creosotum	A
Chlorbutol	A	Production within the Empire should be encouraged.	
Chlorocresol	A	Cresol	A
Parachlorometacresol.		Creta	A
Chloroformum	A	† Crystal Violet	A
† Chloroxylenol	A	Cubeba	C
Parachlorometaxylenol.		Country of origin: — Malay Archipelago. Importation unnecessary. Substitutes:—Hexamine, mandelic acid, scoparium, sulph-anilamide.	
Chondrus	A	† Cummin	C
Production in the United Kingdom should be encouraged.		Cupri Sulphas	A
Chromii Trioxidum (Acidum Chromicum)	A	Cusso	C
Chrysarobinum	B	Country of origin:—N.E. Africa. Importation unnecessary. Substitutes:—Carbon tetrachloride, male fern.	
Production within the Empire should be encouraged. Substitute: Dithranol.		Cyclopropanum	B
† Cignolin	—	† Decicaine	—
Dithranol is identical.		Amethocainæ Hydrochloridum is identical.	
† Cinchona	B	Derris	B
Production within the Empire should be encouraged. Reserved for use as an antimalarial drug. Under Government control S.R. & O., 1942, Nos. 1604, 2668.		Lonchocarpus may be substituted.	
Cinchophenum	A	† Desoxycorticosterone Acetate	B
Cinnamomum	A	Reserve for Addison's disease.	
Coca	A	Dextrosum	B
Production within the Empire should be encouraged.		Under Government control. Reserve for injection.	
Cocaina and its salts	A	Dextrosum Monohydratum	B
† Coccus	B	Under Government control. Strict economy is essential.	
Country of origin:—Canary Islands.		Dial	—
† Codeina	B	Allobarbitonum is identical.	
Colchici Cormus	B	Diamorphinæ Hydrochloridum	A
Colchici Semen	B	† Dienoestrol	C
Production in the United Kingdom should be encouraged.		Digitalis	A
Colocynthis	A	Digoxinum	A
Colophonium	A	Diodone	A
Production within the Empire should be encouraged.		Dionine	—
Copaiba	C	Æthylmorphinæ Hydrochloridum is identical.	
Country of origin: — Northern S. America. Importation unnecessary. Substitutes: — Hexamine, mandelic acid, scoparium, sulph-anilamide.		† Diphenan	A
Coramine	—	Dithranol	A
Nikethamidum is identical.		Dioxyanthranol	
Coriandrum	C	† Dolantin	—
Countries of origin: — Morocco, U.S.S.R., India, Central Europe.		Pethidine Hydrochloride is identical.	

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Doryl	—	Ferri Arsenas	C
Carbacholum is identical.		Substitute:— Ferrous sulphate with arsenic.	
Emetina and its salts	B	Ferri Carbonas	A
See Ipecacuanha.		Ferri Carbonas Saccharatus	B
Ephedra	A	Restrict to children.	
Ephedrina and its salts		Ferri et Ammonii Citras	B
Production within the Empire should be encouraged.		Not the most economical form of iron; ferrous sulphate is cheaper.	
Ergot Alkaloids	A	Ferri et Manganii Citras	C
Ergota	A	Substitute:—Ferrous sulphate.	
Production within the Empire should be encouraged.		Ferri et Quininae Citras	C
Erythritylis Tetranitras Dilutus	C	See Quinine Salts. Substitute:— Ferrous sulphate.	
† Ethisterone	A	Ferri et Potassii Tartras	C
† Eucalyptol	B	Substitute:—Ferrous sulphate.	
Eumydrin	—	Ferri et Strychninae Citras.	C
Atropinae Methylnitras is identical.		Substitute:—Ferrous sulphate with strychnine.	
† Euphorbia	C	Ferri Glycerophosphas	C
Euphyllin	—	Substitute:—Ferrous sulphate.	
Theophyllina cum Æthylenediamina (aminophylline) is identical.		Ferri Hypophosphis	C
Evipan and Evipan Sodium	—	Substitute:—Ferrous sulphate.	
Hexobarbitonum and Hexobarbitonum Solubile are identical.		Ferri Lactas	B
Extractum Fellis Bovini	A	Ferri Perchloridum	A
‡ Extractum Hepatis Liquidum	—	Ferri Subchloridum Citratum	B
† Extractum Hepatis Proteolysatum	B	Not the most economical form of iron: ferrous sulphate is cheaper.	
† Extractum Hepatis Siccum	—	Ferri Sulphas	A
The use of Liver Extracts is controlled by a Defence Regulation, S.R. & O., 1944, No. 32. Liver extracts, including desiccated liver, must not be used except for the treatment of pernicious or other megalocytic anaemias, and the only forms which may be used are injectable liver extract and proteolysed liver extract.		Ferrum Redactum	A
Extractum Malti	B	Ficus	C
Under Government control.		Filix Mas	B
Extractum Parathyroidei (and parathyroid preparations for parenteral injection)	B	Reserve for use when other anthelmintics are contraindicated.	
Extractum Pituitarii Liquidum (and preparations for intranasal insufflation)	A	Production in the United Kingdom should be encouraged.	
Extractum Suprarenali Corticis	A	Fluoresceinum Solubile	A
Extractum Thyroidei Liquidum	A	Fœniculum	C
		Production in the United Kingdom should be encouraged.	
		Fouadin	—
		Stibophenum is identical.	
		† Galangal	C
		Galla	B
		Gelatinum	A
		Gelsemium	C
		Country of origin:—U.S.A. Importation unnecessary. Substitutes:—Synthetic analgesics.	
		Gentiana	C
		Countries of origin: — France, Germany, Spain. Almost unobtainable. Substitute:—Quassia.	
		Production within the Empire should be encouraged.	

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Germanin	—	Iodoformum	A
Suraminum is identical.		Iodophthaleinum	A
Glucosum	B	Iodoxyllum	A
Under Government control. Strict economy is essential.		Iodum	B
† Glycerinum	B	Production at home and within the Empire should be encouraged.	
Glycerylis Trinitras	A	Adequate supplies are available, but, owing to shortage of alcohol, the use of alcoholic solutions of iodine must be greatly restricted.	
Glycyrrhiza	B	Substitutes: — Aqueous solutions of iodine, acriflavine, brilliant green, crystal violet, proflavine, and trinitrophenol.	
Countries of origin: — Spain, Sicily, Italy, Iraq, U.S.S.R. Production within the Empire should be encouraged.		Ipecacuanha	B
Gold Compounds	A	Galenical preparations of ipecacuanha as expectorants and emetics are not essential, and the crude drug should be reserved for the manufacture of emetine.	
† Gonadotrophic Hormones	B	Alternatives: — Squill; Senega.	
† Grindelia	C	Production within the Empire should be encouraged.	
Guaiacol	A	† Ipomoea	B
† Hamamelis	B	Ispaghula	A
Heparin	A	Jaborandi	B
† Hesperidin	B	Reserve for the manufacture of pilocarpine. Production within the Empire should be encouraged.	
Hexamina	A	Jalapa	
† Hexazole	A	Jalapæ Resina	B
Hexobarbitonum	A	Reserve for veterinary use. Countries of origin:—Mexico, India.	
Hexobarbitonum Solubile	A	Substitute:—Colocynth.	
† Hexoestrol	A	Kaolinum	A
Hexylresorcinol	A	† Kino	B
Histaminæ Phosphas Acidus	A	† Kola Nuts	C
Homatropina and its salts	A	† Krameria	B
Hydrargyri Iodidum Rubrum	B	Country of origin:—Peru. Production within the Empire should be encouraged.	
Hydrargyri Oxidum Flavum	B	Lactosum	B
Hydrargyri Oxycyanidum	B	Lævulosum	B
Hydrargyri Perchloridum	B	Lead salts	A
Substitute:—A phenolic antiseptic of the chlorinated phenol type.		† Leptandra (black root)	C
Hydrargyri Subchloridum	B	† Lethane	A
Hydrargyrum	B	Lethane 384 Special, for Medicated (Lethane) Hair Oil. N.W.F.	
Hydrargyrum Ammoniatum	B	Leptazolum	A
Hyoscina and its salts	A	Linum	C
Hyoscyamus muticus	A	Substitute: — Cataplasma Kaolini for poultices.	
For manufacture of atropine. Production within the Empire should be encouraged.		Liquor Calcis Sulphuratæ	A
Hyoscyamus niger	A	† Liquor Cresolis Saponatus	A
Production in the United Kingdom should be encouraged.		Liquor Ferri Perchloridi	A
Ichthammol	B	Liquor Formaldehydi	A
Indicarminum	A		
Injectio Ferri	C		
Substitute:—Ferrous sulphate by mouth.			
Injectio Hepatis	B		
See Extractum Hepatis Liquidum.			
† Insulinum	A		
The stronger concentrations are more economical of materials.			
Insulinum Protaminatum cum Zinco	A		

† Indicates an addition to the First Edition.

‡ Indicates a change from the First Edition.

Liquor Glycerylis Trinitratis	A	Methylsulphonal	C
†Liquor Ethylis Nitritus Concentratus	A	†Methyltestosterone	A
†Liquor Hamamelidis	C	Methylthioninæ Chloridum	A
Liquor Hydrogenii Peroxidi	A	†Mitigal	—
Liquor Picis Carbonis	A	Mesulphen is identical.	
Liquor Vitamini A Concentratus	B	Morphina and its salts	A
Liquor Vitamini D Concentratus	B	Myosalvarsan	—
Liquor Vitaminorum A et D Concentratus	B	Sulpharsphenamina is identical.	
†Liver	—	Nembutal	—
See Extractum Hepatis Liquidum		Pentobarbital Sodium is identical.	
†Lobelia	B	Neoarsphenamina	A
Country of origin: — Eastern U.S.A. Production within the Empire should be encouraged.		Nicotinamidum	A
†Lobelina	B	Nikethamidum	A
Substitutes: — Nikethamidum, leptazolium.		Nitrogenii Monoxidum	A
†Lonchocarpus	B	Novocaine	—
Luminal and Luminal Sodium—		Procainæ Hydrochloridum is identical.	
Phenobarbitonum and Phenobarbitonum Solubile are identical.		Nux Vomica	A
Magnesi Carbonas	A	Oestradiol, Oestriol, Oestrone and their esters	B
Magnesi Chloridum	B	Oleum Abietis	C
Reserve for veterinary use.		Country of origin:—North-east U.S.S.R. Substitute:—any oil of pine.	
Magnesi Oxidum	A	Oleum Amygdalæ	C
Magnesi Sulphas	B	Production within the Empire should be encouraged. All vegetable oils and fats are under Government control. Arachis and other vegetable oils may be used if available.	
Substitute:—Sodium sulphate, of which very large supplies are available.		†Oleum Anethi	B
Magnesi Trisilicas	A	Production within the Empire should be encouraged.	
†Mandrake	C	†Oleum Anisi	B
†Mapharside	—	Production within the Empire should be encouraged.	
Arsphenoxide and Oxophenarsine are identical.		Oleum Arachis	B
Medinal	—	†Oleum Cadinum	B
Barbitonum Solubile is identical.		Production within the Empire should be encouraged.	
Mel	B	†Oleum Camphoræ Rectificatum	B
Under Government control.		Substitute: — Oleum Terebinthinæ. See Camphora.	
†Menaphthonom	A	†Oleum Cardamomi	B
†Menthol	B	†Oleum Cari	B
Production within the Empire should be encouraged.		See Carum.	
†Mepacrinæ Hydrochloridum	B	†Oleum Caryophylli	B
†Mepacrinæ Methanosulphonas		Oleum Chenopodii	B
Reserved for use as antimalarial drugs. Under Government control, S.R. & O., 1942, Nos. 1604, 2668.		In Great Britain reserve for veterinary use. Substitutes: — Phenothiazine (for veterinary use), carbon tetrachloride, thymol. Production within the Empire should be encouraged.	
Mersalylum	A		
†Mesulphen	A		
Methylis Salicylas	A		

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‡ Indicates a change from the First Edition.

† Oleum Cinnamomi	B	ment control. S.R. & O., 1942, Nos. 1604, 2668.	
See Cinnamomum.			
Oleum Crotonis	C	Pancreatinum	A
Unnecessary.		Papainum	A
† Oleum Eucalypti	B	† Papaveretum	A
Oleum Gaultheriæ	C	Papaverine and its salts	A
Substitute:—Methyl salicylate.		Paraffinum Liquidum	B
Oleum Gossypii Seminis	B	Under Government control. Its use should be discouraged.	
Oleum Hippoglossi	B	Paraffinum Molle	B
† Oleum Hydnocarp	B	Under Government control.	
Oleum Iodisatum	A	Paraldehydum	A
† Oleum Limonis	B	Parathyroideum	B
Production within the Empire should be encouraged.		Pelletierinæ Tannas	C
Oleum Lini	B	Countries of origin: — Mediterra- nean countries. Importation un- necessary. Substitutes:—Carbon tetrachloride, male fern.	
Under Government control. Re- serve for internal use in veterinary practice.		† Pennyroyal	C
† Oleum Menthæ Piperitæ	B	† Pentamidine	A
Production within the Empire should be encouraged.		Pentobarbital Sodium	A
Oleum Morrhuæ	A	† Pentothal Sodium	A
Under Government control.		Pepsinum	A
Oleum Olivæ	B	Perabrodil	—
Under Government control. Ara- chis and other suitable vegetable oils are recognised as substitutes in official preparations.		Diodone is identical.	
Oleum Rapæ	B	† Pethidine Hydrochloride	A
Reserve for external use.		Phemitonum	A
Oleum Ricini	A	Phenacetinum	A
Oleum Santali	C	Phenazonum	C
Country of origin:—India. Im- portation unnecessary. Substi- tutes:—Hexamine, mandelic acid, scoparium, sulphanilamide.		Substitutes:—Acetylsalicylic acid, phenacetin.	
Oleum Sesami	B	† Pheniodol	A
See under Oleum Amygdalæ.		Phenobarbitonum	A
† Oleum Terebinthinæ	B	Phenobarbitonum Solubile	A
Production within the Empire should be encouraged.		* Phenol	A
Oleum Theobromatis	A	Phenolphthaleinum	A
† Oleum Vitaminatum	B	Phenothiazine	A
This preparation is in short supply, and should be used only when cod-liver oil is not tolerated.		† Phenylhydrargyri Acetas	B
Opium	A	† Phenylhydrargyri Nitras	B
Orthocaina	A	† Phenytolium Solubile	A
† Orthoform	—	Sodium Diphenylhydantoinate	
Orthocaina is identical.		† Pholedrinum	A
Oxophenarsine	A	Physostigmina and its salts	A
Oxygenium	A	† Picrotoxinum	A
† Pamaquinum	B	Pilocarpina and its salts	B
Reserved for use as an anti- malarial drug. Under Govern-		Substitute:—Physostigmine and its salts for most purposes.	
		Pirevan	A
		† Piroparv	A
		Pituitarium , including anterior lobe extracts.	B
		Pix Carbonis Præparata	A
		Pix Liquida	A
		Plasmoquin	—
		Pamaquinum is identical.	
		Plumbi Acetas	A

† Indicates an addition to the First Edition.

‡ Indicates a change from the First Edition.

Plumbi Monoxidum	A	†Rubiazol	C
Podophylli Resina	B	Substitute:—Sulphanilamide.	
Restrict to Indian Podophyllum.		Saccharinum Solubile	A
†Potassa Sulphurata	A	†Safrol	B
†Potassii Bicarbonas	A	Salicinum	C
†Potassii Bromidum	A	Substitute:—Sodium salicylate.	
†Potassii Chloras	B	Salol	C
†Potassii Citras	B	Salyrgan	—
See under Acidum Citricum.		Injectio Mersalyli is identical.	
†Potassii Hydroxidum	A	Santoninum	B
†Potassii Iodidum	A	Countries of origin: — U.S.S.R.,	
†Potassii Nitras	A	Kashmir. Production within the	
†Potassii Permanganas	B	Empire should be encouraged.	
Potassii Tartras Acidus	B	Substitutes: — Hexylresorcinol;	
See under Acidum Tartaricum.		phenothiazine (for veterinary use).	
Procaïnæ Hydrochloridum	A	†Sarsaparilla	C
Proflavina	A	†Sassafras	C
†Progesterone	B	†Scammonii Resina	B
Prolactin	B	Scilla	A
Prominal	—	Scoparium	A
Phemitonum is identical.		Senega	B
†Propamidine	A	Countries of origin:—Canada and	
Prontosil Album	—	U.S.A. Supplies are limited.	
Sulphanilamidum is identical.		Senna	A
†Prostigmin	A	Sera and Vaccines:—	
Protargol	—	Antitoxinum Diphthericum	A
Argentoproteinum is identical.		Antitoxinum Œdematiens	A
Psyllium	B	Antitoxinum Staphylococci-	
Countries of origin:—Mediterranean countries. Production within the Empire should be encouraged. Substitute:—Ispaghula		cum	A
†Pyrethrum	B	Antitoxinum Streptococci-	
Pyroxylinum	A	cum	A
Quassia	A	Antitoxinum Tetanicum	A
Quillaia	B	Antitoxinum Vibriosepti-	
Countries of origin:—Chile, Peru, India.		cum	A
†Quince Seeds	C	Antitoxinum Welchicum	A
†Quinidinæ Sulphas	B	Serum Antianthraxum	A
Reserved for the treatment of cardiac arrhythmias. Under Government control, S.R. & O. 1942, Nos. 1604, 2668.		Serum Antidysentericum (Shiga)	A
†Quinine Salts	B	Serum Antimeningococcicum	A
Reserved for use as antimalarial drugs. Under Government control, S.R. & O., 1942, Nos. 1604, 2668.		Serum Antipneumococcicum I	A
†Raspberry Leaves	C	Serum Antipneumococcicum II	A
†Resorcinol	B	Toxinum Diphthericum Calefactum	A
Rheum	A	Toxinum Diphthericum Detoxicatum	A
Production of <i>Rheum palmatum</i> in the Empire should be encouraged.		This includes: — Diphtheria toxoid, diphtheria toxoid-antitoxin mixture, diphtheria toxoid antitoxin floccules, and alum precipitated toxoid.	
†Riboflavine	B	Toxinum Diphthericum Diagnosticum	A
		Toxinum Staphylococcicum	A

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‡ Indicates a change from the First Edition.

†Toxinum Staphylococcicum Detoxicatum	A	Vaccinum Louping Ill Sheep.	A
Toxinum Streptococcicum Diagnosticum (Scarlatina)	A	Vaccinum Pasteurella bovis Septicæmia hæmorrhagica vaccine.	A
Toxinum Tetanicum Detoxicatum	A	Vaccinum Salmonella gallinarum	A
Tuberculinum Pristinum	A	Fowl typhoid vaccine.	
Vaccinum Choleraicum	A	Vaccinum Welchii (type B)	A
Vaccinum Pertussis	A	Lamb dysentery vaccine.	
Vaccinum Pestis	A	Vaccinum Welchii (type C)	A
Vaccinum Staphylococcicum	A	Cl. enterotoxæmia — Sheep strike vaccine.	
Vaccinum Typho - paratyphosum	A	Vaccinum Welchii (type D)	A
†Sera and Vaccines, Veterinary:—		Vaccinum Welchii (trivalent)	A
Serum Antianthraxum	A	Types B, C, and D.	
Serum Coli (polyvalent)	A	Johnin diagnosticum	A
Serum Dog Distemper	A	Mallein diagnosticum	A
Serum Erysipelothrix rhusiopathiæ	A	Tuberculinum diagnosticum (avian)	A
Swine erysipelas serum.		Tuberculinum diagnosticum (bovine or human)	A
Serum Leptospira icterohaemorrhagicae	A	†Serpentary	C
Leptospiral jaundice serum.		Sinapis	A
Serum Pasteurella bovis	A	†Skullcap	C
Septicæmia hæmorrhagica serum.		†Slippery Elm Bark	C
Serum Swine Fever	A	Soaps	A
Serum Welchii (type B)	A	Soda Lime	A
Lamb dysentery serum.		Sodii Aminarsonas	A
Serum Welchii (type C)	A	Sodii Benzoas	B
Cl. Enterotoxæmia — Sheep strike serum.		Sodii Bicarbonas	A
Serum Welchii (type D)	A	Sodii Bromidum	B
Sheep pulpy kidney serum.		*Sodii Carbonas	A
Serum Welchii (trivalent)	A	Sodii Chloridum	A
Types B, C, and D.		Sodii Citras	B
Toxinum Staphylococcicum detoxicatum	A	See under Acidum Citricum.	
Toxinum Tetanicum detoxicatum	A	†Sodii Diphenylhydantoinas (Dilantinum Solubile)	—
Vaccinum Antianthraxum	A	Phenytinum Solubile is identical.	
Vaccinum Brucella abortus	A	Sodii Iodidum	A
Live culture for cattle.		†Sodii Lactas	B
Vaccinum Cl. Chauvoei	A	†Sodii Metabisulphis	A
Formalised whole culture		†Sodii Morrhuas	A
Blackleg vaccine.		Sodii Nitris	A
Vaccinum Septique	A	†Sodii Perboras	B
Braxy vaccine.		†Sodii Phosphas	B
Vaccinum Chauvoei and Septique bivalent	A	†Sodii Phosphas Acidus	B
Vaccinum Dog Distemper	A	Sodii et Potassii Tartras	B
Vaccinum Erysipelothrix rhusiopathiæ	A	See under Acidum Tartaricum.	
Swine erysipelas vaccine.		Sodii Salicylas	A
Vaccinum Fowl Pox	A	Sodii Sulphas	A
		†Sodii Tauroglycocholas	B
		Sodii Thiosulphas	A
		Sparteina	C

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‡ Indicates a change from the First Edition.

Spiritus Ætheris Nitrosi	B	‡Syrupus Ferri Phosphatis cum Strychnina	C
Substitute:—Concentrated solution of ethyl nitrite.		Substitute:—Tablets of Easton's Syrup.	
Spiritus Methylatus Industrialis	B	‡Talcum Purificatum	B
Under Government control.		Tamarindus	C
Stannum	A	Countries of origin: — India, Burma, W. Indies. Importation unnecessary.	
Stanni Oxidum	A	Taraxacum	C
Stibophenum	A	Importation unnecessary in wartime. Production in the United Kingdom should be encouraged.	
†Stilbamidine	A	†Terpineol	A
Stilbæstrol	A	†Testosterone	A
Stramonium	A	†Testosterone Propionate	A
Production in the United Kingdom should be encouraged.		Theobromina	A
†Strophanthus	B	Theobromina et Sodii Sali-	A
Strychnina and its salts	A	cylas	A
Syrax	B	Theophyllina	A
Country of origin: — Asiatic Turkey. Production within the Empire should be encouraged. Wanted for compound tincture of benzoin.		Theophyllina cum Æthylenediamina	A
†Succinylsulphathiazole	B	†Theophyllina et Sodii Acetas	A
Supplies are strictly limited.		†Theriaca	B
Sucrosum	B	(For veterinary use).	
Under Government control.		†Thiouracil	A
†Sulphacetamide	B	†Thiourea	A
Supplies are limited.		†Thymol	B
†Sulphadiazine	B	Production within the Empire should be encouraged.	
Supplies are strictly limited.		Thyroidium	A
†Sulphaguanidine	B	Thyroxinsodium	A
Supplies are strictly limited and should be reserved for the treatment of intestinal infections.		Tinctures	B
†Sulphamezathine	B	Many tinctures can be replaced by concentrated preparations. Economy is essential.	
Supplies are limited.		†Totaquina	B
Sulphanilamidum	A	Reserved for use as an antimalarial drug. Under Government Control, S.R. & O., 1942, Nos. 1604, 2668.	
†Sulphapyridinum	B	†Tragacantha	A
Sulpharsphenamina	A	Production within the Empire should be encouraged.	
†Sulphasuxidine	—	Trinitrophenol	A
Succinylsulphathiazole is identical		Tryparsamidum	A
†Sulphathiazole	B	Urea	A
Supplies are limited and should be reserved chiefly for the treatment of staphylococcal infections.		†Urethanum	B
Sulphonal	C	Urginea	A
*Sulphur	A	Uroselectan B	—
Suraminum	A	Iodoxylym is identical.	
Syrups	B	Valeriana	B
The use of all syrups should be discouraged.		Production in the United Kingdom should be encouraged.	
Syrupus Ferri Phosphatis Compositus	B		
Reserve for children.			

* Indicates that the drug is specially called for under Acts and Orders of the Ministry of Agriculture.

† Indicates an addition to the First Edition.

‡ Indicates a change from the First Edition.

Veronal	—	† Vitamin E	C
Barbitonum is identical.		† Wool Alcohols	A
Ventriculus Desiccatus	A	Yatren	—
Vitamins		Chiniofonum is identical.	
See Acetomenaphthonom, Acidum Ascorbicum, Acidum Nicotinicum, Aneurinae Hydrochloridum, Calciferol, Hesperidin, Liquor Vitamini A Concentratus, Liquor Vitamini D Concentratus, Liquor Vitaminorum A et D Concentratus, Menaphthonom, Nicotinamidum, Oleum Hippoglossi, Oleum Morrhuæ, Oleum Vitaminatum.		Zinci Carbonas	A
		Zinci Chloridum	B
		Zinci Oleostearas	B
		Zinci Oxidum	A
		† Zinci Peroxidum	B
		Zinci Sulphas	A
		Zingiber	A
		If the official variety is scarce, supplies from other sources, e.g. Africa, should be permitted.	

† Indicates an addition to the First Edition.

APPENDIX

ECONOMY IN THE USE OF BACTERICIDES

The present position regarding supplies of materials used as bactericides and disinfectants is such that every economy must be effected. In the national interest, it is necessary not only to select those materials which are most readily available but also to reduce the total consumption. Large quantities of disinfectants are used in hospital and private practice under conditions in which they are not likely to be effective. Unless efficient mechanical cleansing of utensils which have contained infected material is carried out, subsequent treatment with a disinfectant may be useless. Sterilisation by heat is always preferable to the use of disinfectants, and should be employed whenever practicable. Two usual types of disinfectants are the mercurial compounds and the phenolic group. Mercury has to be imported and it is in heavy demand for the manufacture of munitions. It is necessary, therefore, to rely mainly on the indigenous coal-tar disinfectants. There is at present no reason to fear any shortage of disinfectants, provided the more highly purified substances are not used for purposes for which the cruder materials would suffice, and provided the coal-tar disinfectants are replaced, where possible, for special purposes by disinfectants such as formaldehyde, hypochlorites and chlorinated lime.

For general disinfection, the use of solutions of cresol with soap, of the lysol type, should be reduced to a minimum and replaced by the cruder disinfectants of the "black fluid" or "white fluid" type, or, for certain purposes, by chlorinated lime. The same is true of the chlorinated phenols, for, though they are highly efficient for special purposes such as disinfection of the skin, it is wasteful to use them where the cruder disinfectants can be employed. M.R.C. War Memorandum No. 6—*Prevention of "Hospital Infection" of Wounds*—Appendix C—contains details regarding the use of disinfectants of the phenolic type for various purposes, and the recommendations which follow are partly based on the information there given.

Recommendations

In general, bactericides should not be used when disinfection by heat is possible. Heat treatment is more efficient and reliable. Infected matter should be removed, with all due precautions, by scrubbing and scouring, where practicable.

Storage of instruments and needles.—These may be kept in Liquor Boracis et Formaldehydi N.W.F. and rinsed with sterile water before use.

Rubber Tubing.—This should be sterilised by boiling at the time of using. If it is thought necessary to keep sterile tubing ready, it can be autoclaved and kept in a sterile towel.

Rubber Sheetting.—Scrubbing with soap and water is all that is necessary unless the sheeting is known to be contaminated in an exceptional way. Heavily contaminated sheeting should be scrubbed and then boiled or autoclaved; if this is impossible it should be scrubbed and sponged over with rag soaked in lysol ($\frac{1}{2}$ fl. oz. to 1 pint of water) and then rinsed thoroughly with tap water.

Linen.—This should be boiled if possible, otherwise it should be soaked overnight in a dilution of a "white fluid" disinfectant having a Chick-Martin coefficient not lower than 3.0 (1 fl. oz. to 1 pail of water is usually strong enough with a good "white fluid").

Baths.—Lysol, undiluted, should be rubbed thoroughly over the surface, using a mop or rag in a gloved hand, for at least one minute. The bath should then be washed well with tap water.

Other surgical utensils—Arm-baths, bowls, dishes, etc.—These should be boiled whenever possible; otherwise, they should be disinfected as for baths, and washed finally with sterile water.

Bed-pans.—If sterilisation by heat is impracticable, thorough mechanical cleansing by flushing and scouring, followed by the use of a "white" or "black" fluid disinfectant is recommended.

Excreta.—When direct disinfection of excreta is necessary a "black" or "white" fluid, having a Chick-Martin coefficient not lower than 3.0, should be used in accordance with the instructions issued by the manufacturer (1 fl. oz. to 2 quarts of water is usually advisable).

Sinks; Drains.—Thorough flushing is most important. Chlorinated lime is a cheap and efficient disinfectant. Washing soda, 1 oz. to 1 quart of hot water may be used for cleansing glazed earthenware. A "black fluid," 1 fl. oz. to 1 pail of water, may be used as a deodorant.

Floors.—As a deodorant, a "black fluid" $\frac{1}{2}$ fl. oz. to 1 pail of soapy water may be used. For local pollution, a "white fluid," or a "black fluid," 4 fl. oz. to 1 pint, should be used.

Phenol Antiseptics

Black fluids and White fluids are emulsions of phenolic substances. For most purposes, "black" and "white" fluids, if of the same efficiency as judged by the Chick-Martin coefficient, are equally suitable. The tendency of "black" fluids to cause staining, however, may be a disadvantage in some circumstances.

Black fluids.—The British Disinfectant Manufacturers' Association state that the following British proprietary disinfectants are of the *Black fluid* type: Anti-fect; Bactocene; Coetas; Disolite; Exenol Superior; Hycol; Hygenol Fluid Disinfectant; Ialine Special; Jeyes' Fluid; Kilrobe 10/12 Black; Killgerm 10/12 Black; Lawes; Metro; Monsanto Black Disinfectant No. 4; Sanitas-Bactox; Septol; Special Creitas; Cooper's Standard Fluid; Vitalin No. 99.

White Fluids.—The British Disinfectant Manufacturers' Association state that the following British proprietary disinfectants are of the *White fluid* type: Baxol X; Betazone No. 1; Exenol D.A. White; Ialine No. 8; Izal; Jeyes' White Cyllin; Kilrobe 18/20 White; Killgerm 18/20 White; Lawes L.W.4; Monsanto White Disinfectant Fluid No. 1; Sanitas-okol; Sal-Hycol; Star White; Sterilite; Superlin White; White Bactocene; White Kerol; White Septol; Wright's Vetersol; Voxsan M.A.F. Disinfectant Fluid.

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